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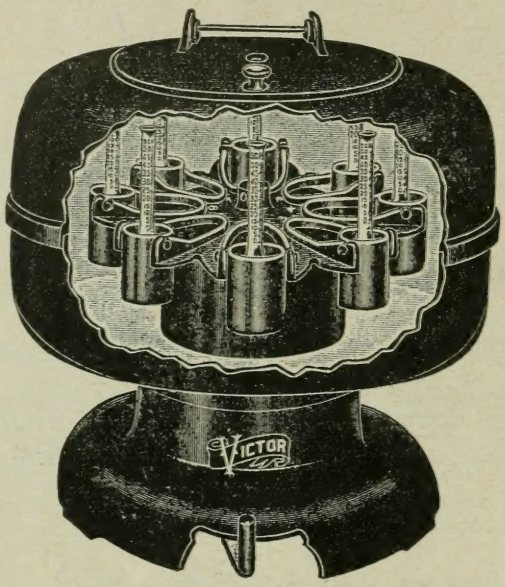

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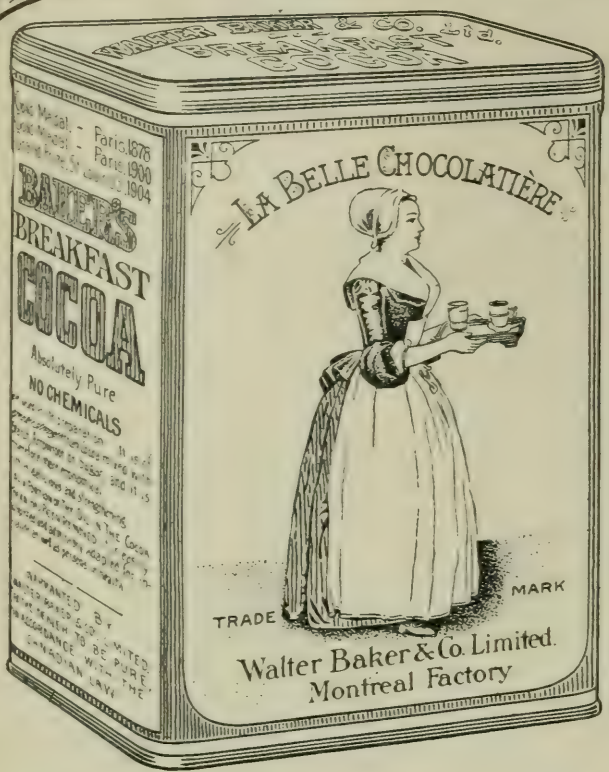

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The Public Health Journal

VOL. VIII. TORONTO, CANADA, JULY, 1917. NO. 7

VARIOLA

By Dr. J. B. Boyle,
Casselman, Ont.

THE intention of this paper, while giving a short review of the history of smallpox as a whole, is more particularly to call attention to certain aspects of the disease, its contagion, diagnosis, and the modified forms presented in recent epidemics.

Smallpox is not by any means a new or rare affection. It existed in China many centuries before Christ.

The pesta magna described by Galen, and of which Marcus Aurelius died, is believed to have been smallpox. In the sixth century it prevailed, and subsequently at the time of the Crusades became widespread. It was brought to America by the Spaniards, early in the seventeenth century. The first accurate account of smallpox was given by Rhazes, an Arabian physician, who lived in the ninth century, and whose admirable description is available in Greenhill's translation for the Sydenham Society.

In the seventeenth century the illustrious Sydenham differentiated measles from smallpox.

Special events in the history of the disease are the introduction of inoculation into Europe, by Lady Mary Wortley Montague, in 1718, and the discovery of vaccination by Jenner, in 1796.

Variola is an acute and infectious disease, characterized by a cutaneous eruption which passes through the stages of papule, vesicle, pustule and crust. It is one of the most virulent of contagious diseases, and persons exposed, if unprotected by vaccination, are almost invariably attacked. One attack may not protect for life, and Osler states that there are reputed instances of a second, and even a third attack. But undoubtedly these secondary attacks are of a mild nature. Smallpox is common at all ages. Males and females are equally affected, and in young children it is particularly fatal. Of the 3,164 deaths in the Montreal epidemic of 1885 and 1886, 2,717 were children under 16 years of age.

The disease is terribly fatal among aboriginal races.

When it was first introduced in America, the Mexicans died by thousands, and the North American Indians have frequently been decimated by this plague.

The negro is said to be especially susceptible, and the mortality greater. According to Welch, this mortality is 42 per cent. in the black, against 29 per cent. in the white. The disease smoulders here and there in different localities, and when favorable conditions obtain, it becomes epidemic. A well-illustrated example of this was furnished in the celebrated Montreal epidemic of 1885. For some years there had been no smallpox in that city, and a large unprotected population had grown up among the French-

*Read before the sixth annual conference of the Ontario Health Officers, Toronto, May 30, 1917

Canadian citizens, many of whom were opposed to vaccination. On February 28th of that year, a Pullman car conductor, who had travelled from Chicago, where the disease was slightly prevalent, was admitted into the Hotel Dieu, (the civic smallpox hospital being at the time closed). Isolation was not carried out, and on the first day of April, a servant in the hospital, died of smallpox. Following her death with "absolutely criminal negligence," the authorities of the hospital dismissed all convalescents who were able to go home, and who showed no symptoms of contagion. Like wildfire in dry grass the disease spread, and in nine months, there died in this city alone, 3.164 persons, of smallpox.

As to the nature of the contagion. I do not think the exact virus of smallpox has yet been determined. Many eminent writers have described a protozoon with a double cycle, and a cytoplasmic stage with small structureless bodies in the lower layer of epithelial cells. Increasing in size they become reticulated and segment into small rounded bodies. In the intra nuclear stage these small rounded bodies, or granules, invade the nuclei of epithelial cells, increase in size, and form a series of vacuoles around a central vacuole.

Osler says that so definite is the relation of the parasites to the skin lesions, that it seems highly probable that they may be the cause of the disease. There appears every evidence at the present day, that smallpox is due to a specific micro organism. There is, therefore, no doubt that the disease is spread by means of this organism, which is produced in every patient. A small quantity of fluid from the pustule inoculated into an unprotected person, gives rise to the disease; this proves the fact that the germ is resident in the pustule.

The germ is also present in exhalations from the patient, and in the blood.

Zulzer proved that it is contained in the blood, by successfully inoculating a monkey, with blood taken from a smallpox patient.

The contagium emitted by a patient, is most intense in his immediate vicinity, and it may be transported in an active state for some distance in the atmosphere. The disease is probably contagious from a very early stage, though I think it has not been determined that the contagion is active before the eruption develops. The most contagious period, however, appears to be that following the pustular stage. The infection of smallpox may be conveyed in the following ways:

1. Through contact with objects which have been infected by the patient, for example, sick room articles.

2. Through direct exposure to the patient, or to infected secretions and excretions.

3. Through infection carried in the clothing, or on the person of healthy individuals.

4. Through air transmission.

5. Through transmission by insects, and domestic animals. The common house fly is essentially a scavenger, and is particularly attracted to foul smelling pus.

It is a common sight in summer time to observe swarms of flies foraging upon this purulent material upon the faces and hands of smallpox patients, the wings and feet of the insects being frequently bathed in the contents of the ruptured pustules.

Welch and Schamberg have investigated to determine whether or not the flies swallow the purulent material. Repeated microscopic examinations of the intestines of flies, caught in the vicinity of smallpox patients, demonstrated the presence of an abundance of streppococci and staphylococci, which are the predominating organisms in varilous pustules. The germs did not appear to be digested, for they took the ordinary stains well. The intestines of flies caught about ordinary households contained no germs of this character, and indeed, often no germs at all.

That the transmission of smallpox through the medium of flies, however, is not an important factor, is evidenced by the fact, that the disease spreads most in the cold months, when the flies are absent, and least in hot months, when they are abundant.

Of most importance, from the medical officer of health's standpoint, is the diagnosis of the disease. The initial ill-

ness of smallpox may be confounded with influenza, typhus or typhoid fever, meningitis, and acute gastritis. The differential diagnosis between a severe case of la grippe or any early typhus case, and smallpox, would be impossible, before the appearance of the eruption. In cerebrospinal meningitis, the retraction of the head and the rigidity of the muscles of the neck, commonly seen in this affection, are seldom met with in smallpox. Attention to the associated symptoms in acute gastritis, and the history of the case should enable the elimination of this disease. After the rash makes its appearance, variola may be confounded in its different stages, with the following diseases: measles, scarlet fever, chicken pox, syphilis, roseola vaccinosa, (that is, the rash sometimes following vaccination), acne, drug eruptions, such as result from the injection of iodides or bromides, impetigo-contagiosa, glanders, and eczema.

I do not propose in the limited time at my disposal, to go into a differential diagnosis between these diseases and smallpox, a complete and accurate description of their differences will be found in any good book on infectious diseases. The chief trouble encountered, however, in a diagnosis, is the meeting at times with different types of the disease. Sydenham states that smallpox has its peculiar kinds, which take one form during one series of years, and another form during another series, and not only does what he calls the, epidemic constitution, vary greatly, but extraordinary variations in the intensity of the disease at the same time, in members of the same family, all exposed to the same infection, are frequently met with. This variability has been well illustrated in recent epidemics. During an epidemic in Eastern Ontario, in the spring of 1914, I was called to attend the family of a J. P., which consisted of father, mother and two sons, aged respectively 22 and 16 years. The father, mother and younger son, passed through a fairly mild form of discrete smallpox, but the older son, who was the last to contract the disease, developed a very severe form of the confluent type. His features were totally unrecognizable, the face swollen to an enormous size, and in the pustular stage, he was hideous to behold. The pustules had all run together, forming a complete abcess all over the face and head. The arms, hands, legs and feet, were in a similar condition, while the trunk was also covered with discrete pustules. None of these cases had previously been vaccinated. I regret that I failed to get photographs of these.

Exhibits "A" and "B," came under my observation during the epidemic of 1901 and 1902.

Exhibit "A": A young man named M. L., 18 years of age, shows a well-marked typical case of discrete variola. The photograph was taken on the 10th day of the eruption. Note that on the face the pustules are broken down and crusts are forming, while on the extremities, the pocks are in the pustular stage, and quite profuse.

Exhibit "B": A. L., a sister of the former, aged nine years, exposed to the same contagion, inoculated with the same infection, at the same time, and in the same house. You will notice the mildness of this attack. The photo was taken on the tenth day of the eruption. The postules are very scarce on the extremities, few on the face, and still fewer on the body. Both of these patients had never been vaccinated.

The mildness of some individual attacks often leads to errors in diagnosis, certain cases may have very few eruptions, and according to Welch, if it is possible to have smallpox with one or two pocks, it is also possible to have a case with no pocks at all. Little wonder is it then, that variola has at times been looked upon as some other trouble of minor importance. It has often been diagnosed as chicken pox, Cuban itch, and even mosquito bites.

I quote from the Montreal Daily Star, of recent date, as follows:

"The Court of Review rendered judgment Saturday, concerning the judgment of the Superior Court, which had condemned the municipality of Coteau Landing, Que., to a fine of $25.00 and costs, for disobeying the orders of the Provincial Board of Health. In June, 1913, the municipal authorities of Coteau Landing,

had been ordered to disinfect eight houses where smallpox had made its appearance. The municipality refused, owing to the fact that the local doctor had stated that the disease was not smallpox, but mosquito bites."

In some cases it is very difficult to diagnose smallpox from varicella. The character of the rash is of little value, its abundance on the trunk is important. At the outset, the papules have rarely the shotty, hard feel of smallpox.

The vesicles are more superficial, and the infiltrated area not so intense, and as a rule, the pocks may be seen in the same patient, in all stages of development. Papules observed on the palms of the hands and soles of the feet, point strongly to smallpox.

Smallpox in utero—a couple of striking examples, a word or two on vaccination, and I have done.

In June, 1902, I was called to attend a case of confinement, near Crysler, one Mrs. O. L. When I reached the house, I found that the case was that of a primipara, and was much surprised also to find that she was in the pustular stage of a very severe discrete form of smallpox. The baby was born healthy and without any signs of the disease. Nor did it contract smallpox subsequently, from the mother. The child died four months later with diarrhoea. The father had a good vaccination scar and proved to be immune. I am led to believe that in this case, the child inherited its immunity from its father.

Exhibit "C": Photograph of a baby girl, born April 7th, 1902, in Casselman, with well-marked pustular excoriations on feet, hands, face and body, which I diagnosed as smallpox. This was rather interesting, as well as puzzling, owing to the fact that neither the father nor mother had had variola, although they were at the time, living in half a house which had been quarantined a month previously for smallpox. The baby lived only 24 hours.

Now, as to vaccination. A popular belief has existed among farmer folk for centuries, that cow-pox protected against smallpox. In 1774, Jesty, a Dorsetshire farmer, who had had cow pox, successfully vaccinated his wife and two sons. But to Jenner, an English student, is given the credit of being the true discoverer of the protective power of vaccination. When a student at Sodbury, a young girl, came to him for advice, and when smallpox was mentioned, she exclaimed, "Oh, I cannot take that disease, for I have had cow pox."

As early as 1780, this protective power was impressed on Jenner's mind, but it was not till many years later that it was brought to a practical issue. On May 14th, 1796, he took matter from a dairy maid's hand, who had cow pox, and inoculated a boy, named James Phipps, aged 8 years. On July 1st, matter was taken from a smallpox pustule, and inserted into the boy, but no disease followed.

In Boston, in 1802, the most crucial experiments in the history of vaccination were made. A number of young boys were inoculated with cow pox, and after recovery, smallpox virus was inserted into their bodies, without any effect. With this same virus, two unvaccinated boys were inoculated, and smallpox produced. The results of these experiments fully justified the Boston Board of Health to come to the conclusion, "that cow-pox is a complete security against smallpox." In the recent epidemic of 1901 and 1914, it was observed that this malady never attacked any person who could boast of a vaccination scar. World-wide statistics prove that communities in which vaccinations and revaccinations are thoroughly and systematically carried out, have the fewest victims, while on the other hand, communities in which vaccination and revaccination is persistently neglected, are those in which epidemics are most prevalent.

State-Wide Education in Social Hygiene*

By William T. Foster,
President Oregon Social Hygiene Society

What Oregon is doing to Prevent Venereal Disease

HOW to reach all the people with those few and simple truths concerning sex, reproduction, and heredity which the welfare of human society demands that all the people should know, is the general practical problem of this generation in the field of social hygiene. The exploration of new fields of service rather than new fields of knowledge is our immediate challenge. It is true that we have much yet to learn. On some aspects of these subjects, authorities disagree; on others, equally important, there are no authorities, and creditable investigations are not even under way. Yet, if we could reach all the people with the truths already known and at the same time stir in them adequate incentives to govern their conduct by their knowledge, all our social hygiene societies could contentedly go out of existence. The one great, urgent problem, therefore, is universal, elementary education.

How beginnings may be made of the solution of that problem, it is my purpose to show by setting forth, concretely, the state-wide educational activities of the Oregon Social Hygiene Society. I shall confine myself to the methods and achievements of that society, because it appears to be the only one that has convinced a state legislature that appropriations for the purpose of curbing the most terrible diseases that ravage human beings are as important as appropriations for conserving the health of hogs and cattle. With $35,000 from the state and $10.000 more from private subscriptions, and—much more important—with the aid of more than fifty public-spirited men and women who have given themselves to the work for years, unsparingly and without pay, the Oregon Society has carried on a state-wide campaign.

Five years ago, at the very outset of its activities, the Society prepared the way for the spread of truth by seeking to check the spread of falsehood. For it was evident that the few hundred thousand circulars that the Society could hope to distribute would not reach as far as millions of newspapers carrying the blatant advertisements of scores of fake "doctors." As long as these charlatans were robbing our people of thousands of dollars every month, they could afford to send out a hundred lying advertisements to counteract each of our bulletins of truth. To damage the fake "doctor" business was therefore a necessary beginning of our campaign of public education.

Scores of such concrete cases were brought before selected groups of citizens, teachers, and physicians; before meetings of the Commercial Club, the Ad Club, the Mothers' Congress, and many other organizations. Our object was to create, through public education, a public sentiment that later on would guarantee the enforcement of such laws as might be passed. The culmination of the campaign appears to have been a meeting of the Retail Merchants' Association, at which the members were told that it was not good business to pay for honest advertising which had to compete in the daily papers with the dishonest claims of quacks. They applauded vigorously; but they were assured that the newspapers could not hear their applause. They were urged to act at once. Two days later, in February, 1912, every fake doctor advertisement disappeared from two of the leading papers of Portland, and soon from all the other papers.

Public sentiment was ready for a sweeping law. It was passed at the next session of the Legislature. Since then it has been unlawful for any person to print or distribute in any manner the kind of advertisements to which we objected. And the law has been rigidly enforced.

*Abstract from an article by William T. Foster, President of the Oregon Social Hygiene Society.

At least four hundred placards have been torn from billboards and from the walls of public buildings throughout the state, and in their places the Society has posted over two thousand permanent, framed notices calling attention to the practices of fake "doctors," the danger of venereal diseases, the free publications of the Society, and the free services of the Medical Advisor.

For three years not a newspaper in Oregon has carried this vilest of all advertising which still appears to be tolerated in every other state. Magazines of national circulation with such advertising are either debarred from entering the state or obliged to publish a special Oregon edition.

The effectiveness of this phase of our program became evident at once. Our field agents, after watching at the doors of medical institutes, reported that their business was rapidly falling off. We soon had the satisfaction of exhibiting photographs of three-fourths of the largest establishments showing "For Rent" signs in the windows. Most of these concerns sought more comfortable and more remunerative existences in other states. From the point of view of these states, this migration will hardly prove a blessing, unless it prompts them all to action. The whole nation should drive this particular tribe of fakers to jail or to honest labor.

Another far-reaching agency of education has been the Oregon law requiring health certificates for marriage. As a measure for preventing the spread of diseases, this law has probably been of no great direct value, for few physicians have the means of making adequate examinations. The value of the law has been educational. It has forced thousands of men and women to face marriage more seriously, to consider the nature of venereal diseases, the laws of heredity, and the consequent responsibilities of parenthood.

The total attendance at educational meetings conducted by the Society during its first four years was 100,348* distributed as follows:

For the training of speakers and teachers	2,870
For organization of committees in 70 towns and cities	7,998
For parents	12,620
For men	39,866
For boys and girls in schools	11,714
For women (outside of schools)	4,481
For communities in other states	15,010
For miscellaneous audiences at Chautauquas, fairs, etc	5,789

Essential to our safe conduct of these meetings has been our training of speakers, teachers, and field workers. For this purpose, our Committee on Public Education prepared a syllabus for speakers and a bulletin for teachers and held frequent classes for instruction. Our annual state conference of educators has brought together notable groups of leaders from all over the state and encouraged us with evidence of progress from year to year. At each conference, stakes have been set for the new achievements and special research problems have been delegated to competent committees for reports at the next conference. For example, the departments of education in certain colleges and universities are now giving special preparation to carefully selected students who, as teachers in certain schools, are to carry on definite experiments in the teaching of social hygiene, under the direction of the departments, and render regular reports. Thus, after a few years we expect to have available for further study the tabulated results of much experience. The Society has also assisted Reed College in conducting an extension course in sex hygiene and morals primarily for the training of teachers and other social workers.

Many parents have been reached through series of "Father and Son" and "Mother and Daughter" meetings, though only a small proportion of parents appear to know enough either to teach their children or to seek the necessary information. More than two hundred meetings have been held for parents; more than fifteen thousand parents have been reached directly in this way, and probably as many more indirectly through the interest created and the pamphlets distributed at these meetings. Every child in the public schools has been given an invitation to one of these meetings and asked by the teachers to take it home to his mother and father. At each meeting

*It adds force to this figure to compare it with the total population of Oregon which by the 1910 census was 672,765.

a physician and a layman make addresses. The layman then asks the physician, in the presence of the audience, the questions that he knows from previous experience are in the minds of most parents.

For the special education of business men, the Society conducts series of noon lunches at the Portland Chamber of Commerce. To hear about the work of education in social hygiene, a selected group is invited, by a man prominent in the city; and this man presides over the meeting. Partly through these meetings, the Society received in subscriptions all the money that it asked for to conduct its early work.

For the education of employees, meetings have been held regularly in factories, department stores, laundries, lumber camps, mining camps, office buildings, candy stores, railroad shops, and commercial schools, always with the co-operation of the employers. Indeed, more than half of the meetings have been held "on company time." Ninety-three of these meetings were held during last year alone.

Noon meetings for men have been held in theatres, the use of which has been donated. At a recent series of five noon meetings, more than 5,000 men attended. A recent afternoon meeting for women brought out 1,525. All the men at the summer encampment of the Oregon National Guard were required to attend one of our meetings. All the police of Portland were reached by our speakers, one of the meetings for that purpose having been held, necessarily, at police headquarters at midnight.

As another method of state-wide extension, we have employed women to visit mothers in their houses. At only 39 out of the 4,147 houses visited last year were our agents unwelcome. The average cost to the Society of bulletins distributed in this way has been 1.1 cents. The average cost for the houses visited has been 5.8 cents.

For the instruction of the legislature in the needs and methods of sex education, a series of letters was sent to every candidate before the election. These letters dealt with concrete evidence collected from week to week by the Society, showing imperative needs. One series was signed by a bank president, another by a college president, another by the Secretary of the State Board of Health, another by the head of a department store. Physicians, for the most part, have kept in the background, assisting mainly where their special knowledge is invaluable. Following the letters, the publications of the Society were sent to each of the prospective legislators. Some of the men elected to the legislature were then invited to the regular weekly luncheons of the Executive Committee of the Society. One of these meetings was attended by the President of the Senate and by the Speaker of the House, who thus learned how the Society was conducting its business. Partly as a result of these efforts to tell the legislature about the work of the Society, Oregon is the first and, I believe, the only state to appropriate money for education in social hygiene.

An easily accessible public exhibit, open day and night, is another effective means of education. The quack "doctors" long ago discovered that it was a paying scheme for scaring and misinforming the public. One hundred and thirteen thousand people saw the exhibit of the Oregon Society during three years. The cost to the Society at many places was less than two cents per person. Invariably the store or booth or state fair or schoolhouse space was given to the Society without charge. For about a year the Exhibit Committee of the Society has been at work revising its old materials and preparing an entirely new exhibit for adolescent boys. We are not satisfied with our own exhibits or with any we have seen in this or other countries.

There are many men in special and immediate need of help. For these urgent cases two thousand framed placards were securely screwed to public buildings and hotels and stations and boats all over the state. They direct attention to the advisory office located in the metropolis of the state, and conducted by the Social Hygiene Society in co-operation with the State Board of Health. The advisory office has been a means of obtaining evidence against quack doctors, and has spread the truth most effectively to quarters that could not otherwise have

been reached. So successful was the early work of this department that the Society placed it on a permanent footing by employing a physician as advisor. In less than four years, he received 1,600 letters and 3,600 callers asking personal advice. No one could read his mail without being shocked at the tragic need for such public confidential aid.

What are the relative values of these various types of education? As an attempt to answer this question, we may take the composite judgment of twelve of the men who have been most closely in touch with the work in Oregon for several years. These men were asked to rate each separate activity, using as a unit of measurement the value of one circular given to one person at the close of a meeting held by the Society. The average of their estimates is a safer guide for future work than any individual opinion. These averages, in the following table, should be read in this way: one letter of inquiry answered by the advisory department is worth ten times as much as one circular given out at the close of a meeting, etc.

Estimated relative values of various educational methods.

Distribution of 1 circular after a meeting	1.
Distribution of 1 circular in response to definite request	4.2
Distribution of 1 circular at an exhibit	1.9
Distribution of 1 circular by house to house canvass	2.4
Attendance of 1 man at a men's meeting (in stores, etc.)	5.2
Attendance of 1 boy at a boy's meeting (exclusive of meetings in schools)	8.5
Attendance of 1 woman or girl at a woman's meeting (in stores, etc.)	6.9
Attendance of 1 parent at a parent's meeting	7.3
Attendance of 1 pubescent boy at a meeting in a grammar school	8.3
Attendance of 1 pubescent girl at a meeting in a grammar school	7.4
Attendance of 1 pubescent boy at a meeting in a high school	7.5
Attendance of 1 pubescent girl at a meeting in a high school	7.2
Attendance of 1 teacher at a conference or lecture	11.9
Attendance of 1 other adult at a conference or lecture	5.5
Attendance of 1 adult at various miscellaneous meetings	4.3
1 call at the Advisory Department	17.4
1 letter answered by Advisory Department	10.1
Attendance of 1 person at the exhibit	6.4
The placing of 1 State Board of Health placard	26.7
The placing of 1 barber shop book (set of 5 circulars, bound)	11.8
The removal of 1 sex medicine sign	13.3
1 visit at a home by employed worker	14.8

The Oregon Society has now been at work for five years. During that time, its activities have been incessant. Its directors, serving wholly without pay, have been active workers, meeting in twelve or fifteen committees on an average of eight times a month. The executive committee of twenty-one members has met from two to five times a month. In the first years of effort, they withstood the reproaches of those who joined the conspiracy of silence in matters of sex, and they suffered vilification and threats of suits at law by "men's specialists" and other quacks who found their victims slipping from their clutches. The approved speakers of the Society have given their invaluable aid freely and enthusiastically. They have made more than fifteen hundred addresses in more than seventy cities and towns in Oregon, and, indeed, in fifteen cities of other states. They have worked, week in and week out, in preparing publications and exhibits. With great care they have arranged the details of innumerable public meetings. They have cheerfully faced the discomforts of travel in sparsely settled regions of Oregon. They have given services which, measured by their earnings in gainful occupations, would have cost the state at least ten thousand dollars a year.

These men and hundreds of men and women who have co-operated with them throughout the state, have been rewarded by the abundant evidence of improved conduct and ideals. They have seen even commercialized prostitution declining. They have seen public sentiment sufficiently aroused to demand the passage of the tinplate ordinance[1] and the successful use of the red-light injunction law[2] in all but three of the first forty-four cases, though the Society has had no official part in this work. The chief sex lies, used for generations to excuse prostitutes, male and female, and to lead them on to the worst of contagious diseases and to moral degradation, are now known to be lies among thousands from whom the truth had been withheld. Now, after five years of public education, for a man to hold that sexual intercourse is a necessity for health, that gonorrhea is not

[1]The co-called "Tin plate" ordinance requires that the name of the owner be posted conspicuously upon any building used as a tenement, hotel, or the like.

[2]The injunction and abatement law enables any citizen, as well as public officials, to enjoin as a nuisance the use of property for purposes of prostitution.

dangerous, or that there should be a double standard of morality, displays such inexcusable ignorance of scientific facts that these harmful utterances are fewer by far than five years ago.

The distribution of 730,000 circulars, the placing of 500 bound volumes of circulars in barber shops, the posting of 2,000 framed placards, the presentation of exhibits to 117,000 persons, the holding of 1,370 public meetings, the visiting of 4,000 private houses, the answering of 1,900 letters, the aiding of 3,900 men who called at the advisory office, the sale by dealers of several thousands of the books recommended by the Society, the instruction, in specific ways, of parents, of teachers, of employers, of girls and boys in morally dangerous occupations, of men and women everywhere in special need—all these and other activities of the Society have done good to every community in the state.

The Society has had the generous aid of schools, churches, news agents, newspapers, railroads, theatre-owners, druggists, boards of health, teachers, business houses, legislatures, city officers, police, and district attorneys. The retail druggists are now warning prospective purchasers against quack medicines. Men do not ward off such easy profits unless they are aware of a grave public duty. Every newspaper in the state has cleaned its columns of the most pernicious advertisements. Not all publishers will sacrifice so much money, unless they know that the business advertised will not stand investigation. So far have the people gone in expressing their appreciation of the work of the Society that in one city they closed all saloons, and postponed running a widely-advertised feature film, in order that everyone in the city might attend a meeting arranged by the Society. In another city 400 men came out when the temperature was below freezing, and sat for two hours in a cold hall, listening to addresses, and then remained to ask questions. In more than one town the cause has attracted a larger gathering of men that any other event in the history of the town. People do not desert saloons and motion picture houses except with the prospect of satisfying more immediate and vital needs.

It is virtually certain that the economic gain alone, due to curbing the spread of venereal diseases, and the consequent increase in the number of days per year of productive labor of Oregon men and women, has amounted to $200,000. Incomplete though the evidence for such an estimate must be, it is nevertheless extensive and sufficient to warrant the minimum named. The actual material saving to the state, due to this one cause, probably has been greater. The additional economic gain to the state during this period, due to the extermination of highly successful quacks, has certainly been not less than $100,000. The known financial condition of several fake concerns, previous to the opening of the campaign against them, indicates that this estimate is low. Considering nothing but the immediate gain in dollars and cents, the returns to the state upon its investment in social hygiene education have been enormous. It is difficult to see how any state can afford not to make such an investment.

The Rochester Bureau of Health Consultation

By George W. Goler, M.D., Health Officer

This consultation was organized the latter part of 1914 in response to what was believed to be a demand for advice relating to the treatment of disease, from a small and growing part of the public. For, up to that time, a great many people came to the office of the Health Bureau asking, not only about the various infectious diseases, but wanting advice about themselves or about the employment of a physician or dentist. Men came to the office with chancre or cancer, diabetes, kidney and heart diseases, and women came asking for obstetrical or gynecological advice or for advice for their children.

To the end that this advice might be given, an afternoon and evening hour was set apart at the Health Bureau, and later another afternoon hour was set apart for this purpose. Then the advertisement on the following page was inserted among the classified advertisements in one of our daily papers.

At first patients came in slowly, three or four in the afternoon and evening. Sometimes in the early days there was not a patient. To-day, the consultation has grown so that 35 to 40 are present in the afternoon and evening hour on Monday; and if the consultation grows as it promises to, we shall be compelled to remove the advertisement from the paper or get considerably more help.

The consultation is a consultation, and not a clinic. It is not established for the purpose of treating disease, save in one instance alone. It was organized and is continued for the purpose of giving advice to people concerning the promotion of health, the prevention of disease, and by referring them to physicians, clinics and hospitals, aiding in the treatment of disease. Though primarily intended as a consultation to which persons with syphilis might come, the wording of the advertisement is such that it brings about 20 per cent. of people who have neither syphilis nor gonorrhea or focal disturbances, the result of these diseases.

As the consultation began to grow, metal signs were printed and distributed in the various business and manufacturing establishments. It has been found advisable not to limit these signs to toilets, but to put them in the hallways and dressing rooms, so that their presence might not be associated altogther with the treatment of gonorrhea and syphilis.

As the consultation grew, the number of syphilitics and gonorrheaics began to increase. A pamphlet on these diseases was prepared, illustrated with pictures of the spirochete in syphilis and the gonococci, telling in simple language how to prevent as well as how to treat these diseases. This booklet is not distributed broadcast, but is given to those who come for advice, so that they may know in brief what can be done for the particular disease with which they are affected.

Mode of Handling Patients

When a patient comes to the consultation—and they are referred to us by physicians, dispensaries, churches, police, charitable organizations, or directed through the signs and advertisement—he is received in a room alone; sometimes in the case of a woman a nurse is present in the room. At any rate, a nurse is always just outside the door. Patients are politely and considerately treated, asked why they came for advice. If they simply require reference to a physician or dentist, they are given the names of two or three practitioners, whom we believe will best serve them, or referred back to their own physician. If unable to pay, the statements are verified by reference to the Charities Department, and they are referred to a district physician. If suffering from gonorrhea and unable to pay, they are referred to one of the city genito-urinary clinics. If suffering with syphilis and not able to pay, a brief history is taken upon a card, blood for a Wassermann test secured, a Leutin test made, or in case a sore is present, diagnosis is

established through the examination of scrapings under dark field illumination.

Diagnosis having once been established, the patient is given a card and his name is entered on a tally book, and he is referred to the Municipal Hospital for a course of diarsenal. When the course of diarsenal has been finished at the Municipal Hospital, he is referred back to the consultation at the Health Bureau, where intramuscular injections of mercury are given at stated intervals. At the end of the mercurial course, the patient is given a month's rest, and then another Wassermann taken, and the course of mercury repeated. Thus, diarsenal, mercury, blood Wassermanns, spinal fluid Wassermanns when necessary, are repeated at prescribed intervals, until the patient shows a persistent negative Wassermann. Then a provocative Wassermann is made and the patient required to report at the end of three months. If Wassermann is negative, then at the end of six months or a year.

VENEREAL DISEASES

Avoid Quacks and Patent Medicines

YOUR TIME AND MONEY WILL BE WASTED
YOU WILL NOT BE CURED
YOUR HEALTH MAY BE RUINED

FREE

confidential advice can be obtained from

THE BUREAU OF HEALTH

CHESTNUT and JAMES STS.

On Mondays, 3 to 4 and 7 to 8 p.m. Thursdays, 3 to 4 p.m

In the beginning we tried referring these patients to clinics or giving them mercurial inunction, but found in order to hold them we were required to give them some material thing. In this way we keep them under observation and give them mercurial injections at the same time.

As has been stated, the patient's attendance at the consultation is entered upon a tally book. If the patient does not return, a note is sent. If the patient does not answer the note at the next consultation, the police notify the patient, and if that does not answer, a warrant is secured for the arrest of the patient and the patient either spends a night in jail or is required to appear in police court, and in either case is committed to the care of the Health Officer, under the Public Health Law. This operation of the Public Health Law and the co-operation of the police have enabled us to keep under observation more than 100 persons with syphilis.*

Of course, many of these people will be found to be "floaters," and even the well-directed efforts of the police fail to find them; but thus far we feel that we should have been unable to carry on the work had it not been for this close co-operation with the police.

In case of syphilis, those people who come to the consultation, who afterwards choose to employ a physician are referred to their physician, and the physician is requested to notify us at the end of each month whether the patient is still under treatment. If the patient refuses to carry out the direction of the physician, we then invoke the aid of the police, and in this way we have co-operated with the physician, so that his patient with syphilis may continue treatment after the definite manifestations of syphilis have disappeared.

When other genito-urinary clinics send us patients for diarsenal, upon request we return these patients to the clinics, with the understading that they will report if patients do not continue the prescribed treatment. In this way we are attempting a general consultation with particular opportunity for the poor man and woman with syphilis. At the same time these people are coming to a general and not a specific clinic. We do not use the words "Venereal Disease," and we treat them kindly as if they were poor, sick and unfortunate.

In 1916 there were 125 new cases of syphilis, of which 89 showed 4+ Wasserman on admittance; 11, 3+; 8, 2+; 1, 1+; 4+—; 5 were negative; 7 infants with hereditary syphilis, no initial Was-

*When one person in a family has been shown to have syphilis, Wassermanns are required from every other member of that family who is at all suspicious.

sermans. Of these the results of treatment are shown by the following table:

Stage of Disease	Apparently recovered	Improved	Unimproved	Died	Total
Primary	1	3	1	..	5
Secondary	10	36	14	..	60
Tertiary	..	12	23	1	36
Hereditary	..	7	6	2	15
Asymptomatica	..	..	..	..	9
	11	58	44	3	125

This is our way in simple form, for developing a plan for the treatment of syphilis. One of these days the general hospitals will have a section in their dispensaries for syphilis and gonorrhea that will be just as important as, for instance, the section in surgery. It is pretty well known that the direction, conduct and appointment of the average genito-urinary clinic is not all that might be desired. The time is approaching when we have to recognize these diseases and provide advice, consultation and preventive measures against them, for if the malarial carrying power of an anopheles mosquito had much to do with the decadence of the glory that belonged to Rome and Greece, and if the cholera vibrio stimulated the contemplative philosophy of the East and prevented a popular appreciation of all that the sciences have brought to the western world, so we may, unless we are careful, become a decadent nation because of syphilis and gonorrhea.

The Illegitimate Child

By. J. J. Kelso

The illegitimate child might be classed as the baffling problem of sociology — made difficult of solution by prejudice, custom and considerations of moral welfare. The child in itself presents no problem. It is usually well-born physically, and free from any defect that must necessarily handicap or retard normal development.

Prudery says it is the child of sin, branded for life, the progeny of lust, and bound to have abnormal sexual tendencies, and ultimately come to a bad end. The careful person says: Don't ask me to adopt a child born out of wedlock, the stigma always follows it, etc.

Experience teaches, however, that all things being equal, the child will grow up naturally, and fill a useful place in the community. Social workers have seen illegitimate children develop and expand from infancy to manhood without the stigma proving an insurmountable barrier.

In the past there has been enormous cruelty and wrong perpetrated on these poor children, by professedly Christian people. Have we not known of Christian doctors hurrying the new-born infant away from weeping mother, to an untimely death—a species of refined murder; Christian nurses who advise against breast feeding; Christian women who insist on the return of a useful servant and urge that the child be got rid of at all costs?

The child is bundled off to a baby farm or boarding place, unmindful of the fact that few women can do for pay what the natural mother could and should do for love, and as a sacred and unavoidable obligation.

An infant knows instinctively when it is in the hands of an unsympathetic attendant, and pines away from no cause that a physician can discover. Babies need more than material things; they need the cuddling and the cooing and the kisses of their own mother, almost as much as ordinary physical sustenance. Many death certificates give the cause of death as "inanition," when it should be "deserted and betrayed by a cruel and unnatural woman."

Another feature of this problem is: country girls, overtaken in their fault, flock to the city to hide their shame, and facilities are provided that are not always in the best interests of the state. It is not altogether the expense to the city that causes concern, but it is the danger that this unwise secrecy may enable a great wrong to take place, and a covering-up of the consequences that rightly belong to the offence.

Too much secrecy is not in the public interest. It is quite a common thing for

Illegitimacy—Preventive Aspects

Dr. Margaret Patterson, Toronto.

THE prevention of anything depends on understanding and removing the cause. As is now universally recognized, feeble mindedness is one great, probably the greatest, source of illegitimacy, but as the problem of the feeble minded is at last being dealt with in a sane manner, we hope that this great cause will soon be removed.

Another source is the fact that so often there is some undetected and uncorrected physical defect or irritation. Every child's body should receive attention in every part, not only should the eyes, nose and throat be examined, but all the orifices of the body. Often there are physical conditions that make it impossible for a child to have a pure mind, or grow up morally sound. Any and all nerve irritations caused by the tightened, elongated, or adherent foreskin of either boy or girl, should receive the attention of the surgeon. It is quite as important that all abnormalities at the pelvic outlet of the body should be corrected, as those of the throat and nose; if these are not corrected they may so act upon the moral and mental faculties that any form of immorality or mental unbalance may result. All physicians who have made a study of these things, testify that many children have been saved from asylums, or even released from them, by the simple operation of circumcision, and many claim that proper surgical attention to the children in infancy would practically empty the reformatories, asylums and jails. Most physicians admit that the entire body of the child requires at least one thorough medical examination, but do not see how this is to be accomplished. Of course, there are many difficulties in the way if this inspection is not made until the child is of school age, but school age is too late, for a physicial irritation may have resulted in bad habits long before school age. I would like to suggest that the Academy of Medicine take steps to have the examination of the infant and the correction of any physical defects made a part of the duty of every physician who attends a confinement. The most opportune time to have these simple, yet necessary operations performed, is while the mother is in bed and the nurse present. I believe this would be one of the greatest conservation measures of the country's most valuable asset—its children. We have said a good deal about the surgical treatment of children who have any abnormality of the sexual organs, but what of adults who probably as the result of vicious living have acquired a condition causing irritation or abnormal desire. We know how often the woman, innocently infected, comes under the surgeon's knife. Why not compel the man to have his organs of generation removed when he contracts venereal disease? This would have a very salutary effect. We have all heard of the old reprobate with the enlarged postrate, betraying many a foolish girl. Surgery is certainly destined to play a much larger part in solving many of the social problems, especially illegitimacy and venereal disease.

Clothing is another matter that should receive some consideration in this discussion, for if more modest, sane, and protective clothing were worn it would have a great moral effect, and prevent much dangerous familiarity, and lack of respect for the human body. Parks, ravines and all such places should be well lighted, and well policed. If wholesome amusements with pure air and healthy surroundings were provided, to take the place of the dance hall, and sensational (often suggestive) "movie" with the dim, unnatural lighting and foul air, it would mean a great deal. Too often, certain classes of young people feel that it is necessary to be bad in order to have a good time.

Another necessary precaution that should be taken is the registration and inspection of all boarding or rooming houses. Each house being required to

girls from quiet country towns to disappear for a season, and return home after having left a baby in some city institution, the story circulated being that she was "visiting friends," or had "taken a situation" for a time. Instances are known where this has happened two or three times to the same person. Friends, nurses and social workers, out of misplaced sympathy, conspire to keep even the mother of the young person from knowing what is actually transpiring. With a conspiracy of silence and secrecy, where is the deterrent and the wholesome warning by which other young people may be taught the lesson of chastity and self-control?

The prevalence of maternity hospitals and boarding homes for babies is not an unmixed blessing, although powerful arguments in their favor can be advanced by good people. Led to the city by the existence of hospitals, retreats, and baby homes, facilities are made too easy for the babies to drift into public institutions, to remain often for years, under artificial conditions. This is the basis of the "Orphan" problem.

The usual custom has been for illegitimate babies to stay in an infants' home for three years, and then to be transferred to a girls' or boy's home, to remain until 12 or 14. There should be a babies' aid association in every large city.

Another difficulty is that where a number of these erring girls are assembled together, there is always the contagion of evil, and it is a well-known fact that the reformation of a young person is made immensely difficult by the indiscriminate mixing up with others of the same class. Notwithstanding their fall, many of these girls are gentle, modest, refined and amenable, especially during their sorrowful experience, to every good and uplifting influence. They should, at all costs, be kept from association with the hardened, indifferent and morally-lacking women, who treat this offence with cynical indifference. Some girls who have fallen a second time have stated that it was the bad talk and flippant conduct of degenerate companions whom they first met in these maternity homes, that led to their continuance in wrong-doing. Keep wrong-doers apart, would be a good motto for social reformers.

Every reasonable aid should be extended to the mother of a first child, and she should be led to look away from the transgression of the moment, to the great and vital fact that motherhood is the highest and noblest function of the human race, that she should regard herself with reverence and devote all her purest thought and effort to the successful accomplishment of her mission. But when young women return a second or third time, it should be taken as evidence that they are incapable of self-government, and in need of more direct control and supervision.

Considering what laws or regulations might be framed to mitigate the evils of illegitimacy, the following suggestions are made:

First. That the separation of mother and child for at least six months should not be permitted.

Second. That breast feeding should be insisted upon by all nurses and doctors.

Third. That all unmarried mothers should be placed under the legal supervision of health officers, with the right to see that both mother and child are properly nourished and cared for.

Fourth. That when in due time it is decided that adoption should be permitted, all necessary information should be furnished the Children's Aid Society, and there should be adequate facilities for getting such children into good homes as speedily as possible.

Fifth. The giving away of babies by irresponsible parties either with or without payment, should be prohibited.

Sixth. Only authorized societies should be allowed to advertise babies for adoption.

Seventh. Public sentiment should be educated to recognize these children as entitled to citizenship, and not necessarily as children to be ill-treated, despised and neglected because of circumstances for which they are in no way responsible.

Babies have rights that should be respected, and their helplessness should constitute their strongest appeal.

have a room where the roomers may receive their guests.

The double standard of morals must be entirely wiped out. Even our law must recognize that the illegitimate child has a father, and that he should be held responsible for the support of the child. Law, however good, can never solve the problem, only a proper attitude of mind, and a respect for one's own body, can truly safeguard. The moral and spiritual side of child-life requires some attention, and in this also the physician must play an important part, for parents are willing to listen to the family doctor, and to attach importance to his advice when he speaks to them regarding the welfare of the children. Physicians should give this side of child hygiene a little thought, and be ready to give to parents a simple, yet scientific statement re the great facts of life, that would enable them to give their children reverent and truthful teaching, that would establish in the child's mind a reverence for God as the Creator of all things, and a respect for its body. "Ye shall know the truth, and the truth shall make you free." One half the ills of humanity are due to incomplete knowledge or ignorance. This is especially true of the ills which come from the unhealthy mystery thrown around sex and sex life. Young people have a right to know the laws of sex, and the consequences of breaking these laws. While we know that knowledge alone does not prove an infallible preservation against the temptations of bodily desires, yet the protective value of knowledge is great.

If physicians would not only use it themselves, but recommend for practical every day use among their patients the wonderful recipe given in Phil. 4:8. If young people thought of the things that are true, honest, just, pure, lovely, of good report, virtue, and praise, they would become such themselves. "As a man thinketh in his heart, so is he."

Some Observations on Scarlet Fever

By Dr. J. C. Hutchinson,
Grafton, Ont.

MR. President and fellow-practitioners, I have styled my paper "Some Observations on Scarlet Fever." The main object of this paper will be twofold. First, to give you a brief statement of my observations on scarlet fever for the last twenty-five years, and secondly, and which I trust will prove more important than any contribution I can give, that is, to lead up to a discussion of the quarantine symptoms, complications, and especially the treatment of this enanthem.

Why I do so.

Since I began to attend these annual conferences of the health officers of the province I can not recall at the present time any discussion on this disease. Consequently I will be very much disappointed if we do not have this subject thoroughly discussed at the present meeting.

As I said before, my observations will be limited to about a quarter of a century. Do not become alarmed or uneasy at the length of time involved. I intend to be brief. During the first seven years in practice I did not see a dozen cases all told. In the last fifteen to eighteen years probably in the neighborhood of half a hundred.

Is this disease on the decrease or are all cases reported?

My first observation is that there have been many epidemics in the past which have never been reported, owing to the type of the disease being very mild, or what the laity call scarlatina or "Red Rash." Before the councils of the municipalities were compelled to appoint health officers as under the provisions of the present health act, many epidemics passed unnoticed. I can vouch for the absolute truth of this statement. I know for a fact, that this has happened at least

three times in my own municipality during the last fifteen years.

In one epidemic there must have been forty or fifty cases, and yet a physician was never called in to attend a single case, because the type was mild, and because the people were ignorant of the very serious nature of the disease. I was also suspicious that they wished to evade quarantine, and thereby put one over the local board of health. I was called in some weeks later to treat some of the complications or sequelae.

This epidemic happened in a rural district. The majority of the cases were in farm houses. The farmers sent their milk to the dairy or cheese factory. In some cases, it was sent to the city of Toronto. Business went on as usual. I was powerless to act, because I had no legal status as a M. O. H. Now, of course, that has been remedied. If I heard of any suspicious cases within my jurisdiction, it would be my duty to investigate and quarantine, if necessary.

My next observation then is obvious. We are making progress in stamping out the contagious diseases, or at least keeping these under control by taking precautionary measures to limit the spread of these diseases by a rigid quarantine.

Before the regulation, requiring the compulsory appointment of medical officers of health, was passed, many of the township councils, in order to save money, sacrificed the health of the community, and therefore the best interests of the people, by refusing to make any appointment. That was the case in my own municipality. I had the appointment, for one year, then it was cut out by a short-sighted council who thought such an officer unnecessary. Thanks to the initiative of the Provincial Board of Health, and the legislation consequent upon their action, that has all been changed. I think the results have justified the change.

My next observation is that the laity are not the only ones who are guilty of negligence. Even physicians themselves are not too particular in reporting cases of contagious diseases. If the people are negligent, the medical men who do not report and quarantine, are criminally negligent. By acting thus, physicians are playing into the hands of the community because a great many people do not like to be quarantined, and if the disease is mild, they think there is no harm done if cases go unreported. What is to be done with such transgressors? We do not like to make an example of a brother-practitioner by bringing him up before a magistrate. What line of action do you suggest? If we are to be the educators of the community we should in every case that comes before us whether it is mild or severe, show them the absolute necessity of a rigid quarantine in every case. The discussion of epidemics showing a mild type of the disease leads me to my next observation. It is one of vast importance, and one which doubtless many of you have met in your experience with scarlet fever, viz., the very wide difference in the same epidemic, and even in the same family.

I give the following illustrative cases.

A lady acquaintance of mine visited some friends in Detroit, one of whom was a physician practicing in that city. While there, her two boys had slight sore throats, apparently nothing more. She came home and her children mingled with other children in the same house, with the result that two vigorous, healthy little girls, aged four and six respectively, took down with a malignant type of scarlet fever. The younger never spoke after the initial vomiting, and died in forty-eight hours; the elder lived three days. The physician, a young practitioner, who was called in, pronounced it an aggravated type of chicken pox. An old Irish lady came in to see the children. She instantly recognized the serious nature of the disease, and told the doctor that it was scarlet fever. No doubt, during her long life (she was the mother of 13 herself) she had seen scores of cases, whereas the physician had probably seen none. Gentlemen, these cases did not occur in my own practice, but they prove beyond the possibility of a doubt that the physician should be exceedingly careful in the recognizing of such cases and not depend on the old women of the neighborhood for a diagnosis. I have no doubt

that there were many old women of the last century who were as competent as many physicians in the diagnosis of the exanthemats. Not only do severe types result from contact with mild types, but vice versa. I can recall two well-marked examples in the same family.

In a family of three girls and one boy, two girls took down with a severe type of the disease, and one with a malignant type of the disease. The throat was putrid, and the rash coarser than that of measles. A boy of five years of age had the disease in so light a form that had he been the only one who took sick, no physician would have been called in and the case would have passed unrecognized.

How do you account for these differences of type? Does the virus become attenuated or weakened? or have some people a partial immunity against the disease. I can offer no explanation.

My next observation, and one which the majority of you will agree with, is that we are more likely to have an acute nephrites after the mild cases than the severe ones. The reasons are obvious. In the mild epidemics, my experience has been that no physician has been in attendance, with the result that before convalescence was thoroughly established or recovery complete, the patient was allowed to go out as usual. An acute nephrites was often the outcome, and in a good many cases fatal results followed, or if the case recovers. it leaves behind a damaged kidney. Obviously in these cases an ounce of prevention is worth a pound of cure; but the difficulty is we are not called in when we can do the most good, when a little medical advice would in all probability save a life. In the severe cases a physician is usually in attendance. He has absolute control of the patient for six weeks. The results are usually favorable. How necessary then it must be that all cases of whatever degree of severity should be under the care of a competent physician.

My next observation is that though we often have heart failure in diphtheria, it is not infrequent in scarlet fever, and sometimes in cases of not a very severe type. We certainly have failure of the vital powers, and especially the heart, in the fatal tonaemia of malignant types; but the point I wish to make is that we get it also in milder cases.

A young woman aged 21, a teacher by profession, strong, vigorous, with no history of any previous illness, visited some relatives in Toronto. While there, her sister had a sore throat with a very slight rash. The physician did not attach any importance to the case. Exactly ten days after, this person came home and was ill on her return. I was at once called in and had no hesitation in diagnosing the case as one of scarlet fever. She developed a moderate fever, no delirium, a mild angina, and a very coarse rash. The case did well for the first week. During the second week when the rash had almost disappeared and the fever had subsided. she was seized with heart failure. The pulse was feeble, fluttering and frequent. Finally I could scarcely feel it at all, consequently I had to resort to the stethescope to count the heart pulsations. I had great difficulty in keeping the patient from actual collapse for at least 48 hours. I used hypo's of strychnine and whiskey per os. After two days she made an uneventful recovery. At no time was there any involvement of the kidneys.

I did not consider it necessary to discuss the symptoms of this disease except in the cases I have given for illustration. You all know these as well. if not better, than I do.

I now come to my next observation, and I will be brief. During the last quarter of a century, it is my opinion that we have not made any great advances in the treatment of this disease. We have not discovered any specific as in the case of diphtheria. I do not think that there are any remedies which will cut it short. Like pneumonia, it is self-limited. Good nursing, a careful diet, attention to the throat and ears, hydrotherapy for the Hyper pyrexia, constitute the main indications. I have never had the opportunity to test any of the serums recommended by some as specifics in scarlet fever. I have only had two malignant cases to deal with, and these were both moribund when I was called in, consequently there was no time to do anything. I think it has been sufficiently recognized that in the

presence of the severer forms we are still too often helpless. I believe that in the epidemic at Port Hope a few years ago, the serum was tried in a number of cases, but with little or no success. I would like to know what has been the experience of the gentlemen present, in this connection. I cannot speak with any authority.

I have had two fatal cases of nephritis, in both these, no physician was called in to treat the case at the start, consequently any diet was given, the patients were allowed out as usual, with the result that a severe nephritis set in. In the one case a little boy was allowed to go out in the dead of winter, while he was still desquamating. In the other, a young girl was allowed to go in bathing while in the same critical state of the disease. The lessons from these cases are obvious. All cases, of whatever severity, need a physician if only to give advice, as to the isolation, confinement to bed for at least two weeks after the fever has subsided, and lastly, to keep them on a strictly liquid diet, of which milk should be the chief constituent. In this way a nephritis may in the vast majority of cases be prevented.

Just a few words in conclusion:

Some years ago at one of our medical health conventions, prominent members present, expressed the fear, that owing to the rapid strides made in the realm of preventative medicine, the medical profession would suffer financially on account of the diminishing amount of practice compared with that of bygone years. Allow me to assure him and all such, that their fears will be proved groundless. The great probability is that on account of the ignorance of the general community and our inability to cope with a successful quarantine, owing chiefly to the comparative mildness of many epidemics, we will have scarlet fever with us for many generations to come.

The Sanitary Inspectors' Association of Western Canada

Scavenging—Is Standardization Worth While?

By Douglas Little, Cent. R. San. I.,
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Second-Prize Essay

The officials of every settled community have to encounter, sooner or later, the problem of the collection and final disposition of its wastes. This is a problem which demands closer thought and study as time rolls on. The fundamental principles underlying the problem are efficiency and cost. The betterment of surrounding conditions, and, consequently, the preservation of health, is ever one of the foremost duties of a public servant, but the paramount question, raised by the man in the street, is always, "How much will it cost?" Naturally, then, both the sanitary and the financial considerations of a scavenging system must be made carefully, by working out details that will best suit the conditions as they exist. Though the conditions existing in different municipalities are variable, yet there are many characteristics which are common to all. Many different methods of collection and disposal of refuse are practised. No standard has ever been thoroughly developed. One reason for this is the lack of relative data with which to make comparisons, and thus enable one community to benefit by the experiences of another. If such data were available, we should possibly find modifications in the methods employed by one community, as a result of comparisons with another. Naturally, these adopted methods would tend towards uniformity, and this, no doubt, would lead to greater efficiency. In other words, "Is standardization worth while?" Let us see. What are the standard household wastes in their order of importance? 1, sewage; 2, garbage; 3, rubbish; 4, ashes. We are not considering either the collection or disposal of sewage in this short argument, but are directly concerned with the other three. First of all, let us ask, "What is garbage?" Every community is agreed on one point regarding this. They state that garbage consists of organic wastes, such as animal and vegetable matter, coming from kitchens, restaurants and hotels. Still, why not go a little further, and say, that garbage attracts flies, and is therefore a source of danger? But so do dirty rags, old mattresses, paper, and floor sweepings, especially if soiled with organic matter. Why not classify, then, under a sub-heading with garbage, "Everything else that will burn?" Let the organic matter be properly stored, and removed regularly, and the burning of the residue in furnaces, etc., be encouraged, to save hauling, and, incidentally, expense.

Rubbish is defined in various ways, and may consist of wood, paper, rags, excelsior, leather, rubber, straw, old mattresses, broken furniture, crockery, tin cans, glass, hardware, building materials, etc., ad. lib. Why not have a lot of this rubbish eliminated, and destroyed on the premises where created? This would leave the word, "Rubbish," to simply mean: "Everything discarded in the home that will not burn."

Ashes are the residue from fires in houses, apartment blocks, etc., but, at times, may be mixed with either rubbish, or garbage.

If these constituents of household refuse, then, were standardized, what would we get?

1. Garbage—All animal and vegetable refuse. Everything else that will not burn coming from the home.

2. Rubbish—Everything that will not burn coming from the home.

3. Ashes—Clean ashes only.

Efficient service must ever be the standard set for scavenging, and scavenging really begins at the home. The care and treatment of household refuse is just as important as its collection, or final disposal. Therefore, in considering the standardization of the refuse problem, let us divide it under three heads, namely: 1, household treatment; 2, collection; 3, disposal.

House treatment. No general standard has ever been set for the garbage receptacle. One city will adopt one size, whilst another will choose something different. These vary greatly, because of the many different methods of treatment that are adopted. Now, the broad question of final disposition of a city's wastes begins right here. If the authorities decide on incineration as the final disposition, then a one-can system may be adopted.

If a conservation and reduction of garbage is planned, together with the incineration of rubbish and ashes, then a two-can system may be used.

If garbage only is put through the machine, then a three-can system may be inaugurated.

On what points, then, could we standardize this treatment of house refuse? Again, taking efficiency and cost as the basis on which to work, the situation may be stated thus:

1. Standardize the receptacles and their location.

2. Make the system sanitary and clean.

3. Make it simple.

4. Make it fly-proof.

5. Study its effect on the cleanliness of collection.

6. Study economy.

7. Study its effect on disposal.

The receptacle, and its location—The garbage can should be of galvanized iron, with strong handles, and a tightly-fitting cover. It should be remembered, that the size of the can greatly affects the cost of collection. One man should be able to lift the can unaided. If the contents have to be emptied from a large can to one of smaller size by the collector, time is lost. Besides, the method is unclean. Again, the cost of collection is affected quite as much by the placing of the garbage can. If the scavenger has to walk half way across a lot, or up to a back door to lift the garbage, time again is lost. Therefore, standardize the can, and also its location. This argument holds good in every case whether in the collection of mixed refuse, or whether it be separated.

Cleanliness — Decomposing garbage smells very badly. Water coming from it is foul and putrid. The area around the cans may become soaked, and constitute a nuisance. The receptacle itself may become a breeding place for flies. A standard should be set to eliminate these conditions as much as possible. These may become neutralized to a great extent by mixing garbage with ashes and rubbish in one can, as fewer maggots are found in mixed refuse than in pure garbage, because of the tendency of ashes, and rubbish, to change the whole mixture into a dry, dusty compound. Still, if the garbage is properly strained over the kitchen sink, and then wrapped in paper, the result is even more effective in keeping the receptacle clean, and in the prevention of the breeding of fly maggots.

There is very little nuisance to be found among the incombustible refuse of a household. Flies may be attracted by bottles, and tins, which have contained organic matter. A good, galvanized, covered can, or a good, wooden box, tightly covered, could be used for storing this class of refuse. Ashes only become annoying, when allowed to blow around. Sometimes, of course, the piles are unsightly, but the method of storing is guided by the frequency and manner of collection.

Simplicity—The most simple arrangement for the household treatment of refuse, is the one-can system, but, of course, everything depends on the method adopted for disposal. Many people will not readily understand how the separa-

tion should be made, and even go so far as to demand "the why and the wherefore" of the same. Still, life is simply one long, educational problem, and it is not really a very hard matter to teach the principles of cleanliness, and efficiency of purpose, when once a system has been adopted.

Flies—It has been noted that flies breed far more in pure garbage, than in mixed refuse. It takes about a couple of weeks for the development of the fly, after the egg is laid. Therefore the can should be emptied at least twice during that period, and more often if possible, (whether containing pure garbage, or mixed refuse). This will tend to keep a check on flies.

Storage effect on collection—Raw garbage soils everything with which it comes in contact. Cans are made filthy, and naturally, so are wagons. Mixed refuse contains less moisture and does not soil the wagons so much. Yet, if garbage be properly strained, and wrapped in paper, this filthy handling is greatly avoided. A cleaner can is thus maintained, and consequently—a cleaner service.

But what about economy? We have very few figures available, and hardly any cost data that is clear enough to determine the relative economies of collecting mixed refuse and separated refuse. Here is where a standard of costs would prove invaluable. Mixed refuse need not be collected as often as separated garbage, but should be lifted much more frequently than either ashes or incombustible refuse. It would not be a very hard matter to judge any collection system from an economical standpoint, were any few sets of standard costs available.

Storage effect on disposal—If incineration of all refuse is the method adopted for disposal, then, a one-can system may be installed.

If a reduction system is to be put into operation for garbage, coupled with incineration for ashes and rubbish, then a two-can storage may be necessary.

But if a three-can system is introduced by a community, then again a standard should be set for the receptacles, and a definite line drawn regarding disposal. A goodly revenue may be procured by the systematic examination, and utilization, of a city's wastes, when properly separated. Ashes are a valuable asset in many communities; incombustible refuse can be properly sorted over with profit, and garbage, if properly handled, may become a good source of revenue.

But what are the relative revenues from any, or all, of these systems? Again, we lack comparative data. Were some reliable figures shown, especially in these hard and stringent times, surely, some form of conservation of waste would make its own appeal!

Collection — Generally classified as scavenging. Here again, we find much variation. Everything, of course, depends on the frequency of service, and the regularity with which this duty is performed.

This is entirely a matter for the health officer to decide, because general conditions and variable surroundings practically govern the situation, so no more need be said. But what are the fundamental principles underlying a satisfactory scavenging service? Surely, the primary factor is "Cleanliness." Then, "Cost" looms up in the background, and quickly decides—"Frequency of service."

We have seen that a clean house treatment facilitates a clean collection, and this depends entirely upon the type of wagon box used. Wooden boxes are liable to become very offensive, because they are, more or less, porous.

For garbage, then, the wagon boxes should be standardized, and made of galvanized sheet metal, or steel. These could be easily cleaned. A standard of daily cleansing, especially in hot weather, should be set.

Hired teams versus city-owned—Is it more economical to have a city-owned plant, or to let the scavenging by contract? I will only touch here on the moral aspects of this argument, as the trend of civic ownership seems to be going in the right direction. The operations of a system of contract scavenging are, to say the least, very elastic. There seems to be not the slightest doubt that a better collection service can be maintained if a city operates its own plant. At least, this should result, if the most is made of

the opportunities offered, because the necessary element of civic responsibility can be better developed in a city department, than by contract. But why? All complaints come through the city department, and therefore must be handled by them. Men can be found (and are found) as drivers, who take a certain pride in their work, simply because these men are not hired—they form part and parcel of the civic enterprise. It is easier for a man in charge of a number of city-owned teams to arrange and utilize them to the best advantage, for it may be found necessary to make changes, and even, possibly, to reorganize the existing methods of collection. This may be urgently needed, to enable a department to keep the cost of operations within the amounts at its disposal.

But what is to determine whether a change will be beneficial? It may be found cheaper to remove refuse from a certain part of a city, by teams with a short haul, and let them make three trips per day instead of two. It may be found cheaper to reduce some teams to singles, because the loads carried will not cover the cost of an extra horse. It may be proved that a helper sent out with a team, does not increase the load sufficiently, to warrant the extra expense. But how are we to arrive at these facts? Only by a standardization of costs.

As there is no uniform practice in Canada, we find that even the best methods of to-day, are capable of being improved. Many of the economies which could be got out of a city's wastes are lost, and civic ownership of utilities seems, as yet, to be in its infancy. The alterations of existing conditions is too great a problem to tackle, because of the risks to be assumed.

And what are the risks? Simply a lack of actual facts.

The value of figures—One scavenging report gives the totals in tons, while another quotes cubic yards. Another will give percentages, or loads (either weighed, or estimated). Supposing, for the sake of argument, we find a report of garbage collections shown in the following way:

Garbage — Loads collected, 1,277; weight, 3,449,530 lbs.; average load, 2,701 lbs.; total cost of collection, $2,665.46; average cost, $2.09 per load.

What close estimates of the facts can anyone get?

Were these teams, or singles, or both?

What were the teams drawing, on an average?

What the singles?

What do the teams cost per load?

What the singles?

What is the cost, per ton, for: (A) teams; (B) singles?

It is pretty safe to say that no one can tell.

But suppose, again, for argument's sake this report is systemized, and standardized, to show these items, what do we get?

Teams—

Loads, 804; weight, 2,300,380 lbs.; average, 2,861. Cost—Load, $2.28; ton, $1.59.

Singles—

Loads, 473; weight, 1,149,150 lbs.; average, 2,429. Cost—Load, $1.76; ton, $1.45.

Combined—

Loads, 1,277; weight, 3,449,530 lbs.; average, 2,701. Cost—Load, $2.09; ton, $1.54.

Total cost, $2,665.46.

Now, we find that a team draws 2,861 pounds per load on an average, and a single draws 2,429 pounds.

The cost of a ton for a team is $1.59, and for a single, $1.45. A team costs $2.28 per load, while a single costs only $1.76. Therefore, we know, that a team costing $2.28 per load, can readily be substituted by a single, costing $1.76 per load, providing of course, that the haul is easy, and the roads fairly good.

All these things must be taken into consideration, before a really definite verdict can be given, and, without the necessary data on hand, only a guess regarding true costs for collecting each class of refuse can be made.

Let it suffice to say that one community can benefit by the experiences of another, and naturally avoid many pitfalls. How, then, can this benefit Western Canada?

What proof have we that such data will ever be used?

Research is the slogan of every big business to-day. Facts are what they want. They spend far more money now, than ever before seeking out more efficient methods, finding new ways of using old materials, looking into reduction of costs, and definitely settling more economic methods of organization. Canada has been slow to grasp this. Many of her methods are obsolete, cumbersome, and badly adapted to modern requirements.

It is nevertheless true, that a great amount of information of the highest practical value can be, and has been accumulated by the various departments of the government. We may confidently expect that much reliable data will, in time, be given out, with a view to improving the efficiency of the country, and to the conserving of both energy and materials. Naturally, this cannot be done without the united support and concurrent efforts of all. Surely, then, there is a great educational work ahead for the provincial boards of health along these lines. What would be a more valuable asset to them than reliable references for the benefit and guidance of their smaller constituencies?

If these references are to be made of any practical value, why not have them prepared along certain specified lines? Would not the actual facts of to-day throw some light on the possibilities of to-morrow? Who can tell?

MONTHLY JOTTINGS

It is expected that the Annual meeting will be held this year at some point in Saskatchewan, probably in Regina. Details as to place and date are not yet, however, finally arranged. As soon as these are completed, all the members will be notified, and the Executive hope and trust that each member will make an effort to be present.

* * *

In this connection it is suggested that the various branches, and indeed individual inspectors, will be quite justified in asking from their employers—the various municipalities—a grant to defray their expenses. It is surely a good thing for the members of the Association scattered all over Western Canada, to get together once a year to discuss the various problems met with in public health work. Speak to your health officer about this, and get him to back up your request.

* * *

No man is in a better position to judge of the difficulties of the sanitary inspector—especially those in rural municipalities where there is not a whole-time health officer, where the inspector often has to fulfil other duties not connected with sanitation—than our president, Mr. Thomas Watson, of Regina. Occupying as he does, the position of chief sanitary inspector for the Province of Saskatchewan, and in that capacity visiting points all over the Province, he is able to appreciate fully what is needed.

* * *

If any member has an amendment to the Constitution to propose, such amendment must be in the hands of the secretary thirty days before the annual meeting.

* * *

The name of Mr. A. J. Peckett, of Port Arthur, one of our associate members, has been placed on the honor roll of those on active service. This brings the number up to twenty-four.

* * *

President Watson, of Regina, has returned the cheque for the first prize which he won in the recent prize essay contest, to the Executive, with the request that it be used for some good purpose connected with the Association, or for comforts for the boys at the front.

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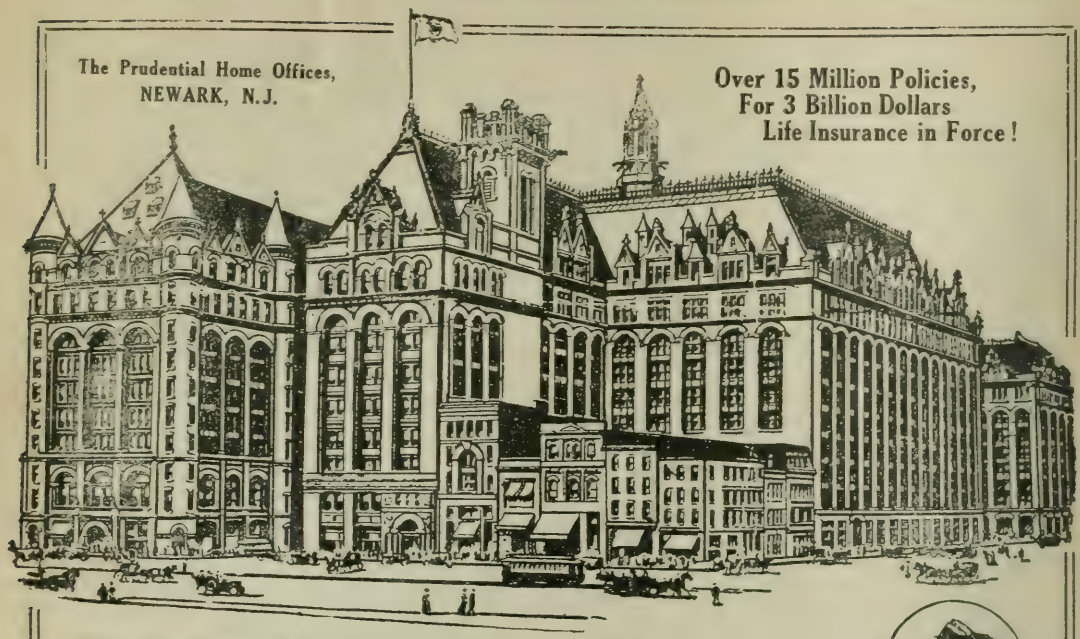

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The first two lessons of the Company's correspondence course will be sent to anyone interested. It will pay young men who desire to get on in the world to look into this.

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North American Life Assurance Co.

Head Office: Toronto, Can.

Are You to Have a Clean-up Campaign in Your City ?

If you are to have one

You should get in touch with the Metropolitan Representative in your city. He will be able and glad to help you.

If you are not to have one

You should organize one, it will do much to emphasize to your citizens the importance of cleanliness and right living.

Last year the Company co-operated in Clean-up Campaigns in 247 cities and towns and through its agents brought the Clean-up message into 1,500,000 homes during the days set aside for Clean-up. This year many more cities will be added to the list.

Your City Should Be One of the Number

Call on the Metropolitan representative for details or write to the Welfare Division.

Metropolitan Life Insurance Company

1 Madison Ave., New York City

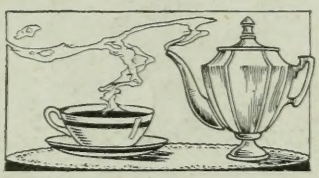
What's in a Name?

It is interesting sometimes to analyze the general public mind and to note how it is swayed by propaganda or even ordinary gossip.

Following this up, it is even more interesting to see how frequently propagandists and gossipers center their attacks on name rather than on actual faults or virtues.

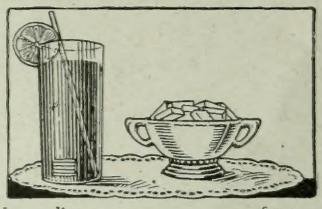
Here, for example, is a humorous situation.

Coffee, tea and Coca-Cola. Three beverages that derive their refreshing qualities from the same principle—caffeine.



For selfish purposes and through extensive use of printer's ink a systematic campaign has been directed against coffee and its caffeine content. That beverage has suffered but little in the aggregate—yet the attacks have been felt. Fostered by business maliciousness and by careless gossip Coca-Cola, as you know, has suffered occasional attack for its caffeine content.

Yet tea has escaped them all—and very rightly per se. But the interesting part of the whole thing is that the caffeine in Coca-Cola is



in reality a pure essence of tea—derived from it. And a glass of Coca-Cola contains less of this *essence* than a cup of tea. Must we not conclude then that attacks on Coca-Cola have their origin either in ignorance or self-interest.

Agreeing with us, as you must Doctor, we are certain this review will present the situation to you in a new light.

A Digest

of the authoritative facts and figures relating to the composition and dietetic value of Coca-Cola will be sent on request.

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Toronto, Ont.

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